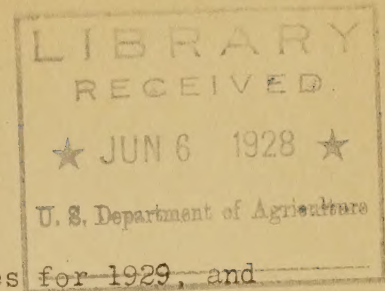


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DEPARTMENT OF AGRICULTURE

RESEARCH WORK

Increases Recommended in Department Estimates for 1929, and  
Amounts Provided by Appropriation Act, 1929.

	Estimates	Act
OFFICE OF INFORMATION.		
Printing "Fruit and Vegetable Disease Handbook".....	\$50,000	-----
LIBRARY.		
Increased facilities .....	5,420	\$5,420
OFFICE OF EXPERIMENT STATIONS.		
State of experiment stations under Purnell Act.....	480,000	480,000
Administration of station funds .....	8,780	5,434
Alaska experiment stations .....	25,000	8,760
Hawaii station .....	10,000	-----
Porto Rico station .....	10,000	-----
Guam station .....	10,000	-----
Virgin Islands station .....	5,000	-----
American Samoa station .....	10,000	-----
	558,780	494,194
WEATHER BUREAU.		
Establishment of two agricultural meteorological stations in important farming areas for investi- gating the relation of weather conditions to crop yields .....	6,000	.....
Extension of river and flood forecasting service to important sections not now covered .....	3,920	.....
Extension of corn and wheat region weather service to Pacific Northwest .....	6,300	.....
Compilation of meteorological data required in re- vising pilot charts of Hydrographic Office, Navy Department .....	9,100	.....
	25,320	.....
BUREAU OF ANIMAL INDUSTRY.		
Swine inbreeding.....	4,000	.....
Swine growth studies .....	2,500	.....
Investigation of milk goats, Angora goats, and Karakul sheep .....	7,000	.....
Horse nutrition and maintenance studies .....	2,000	.....
Genetic research .....	2,400	.....
Beef-cattle investigations, Beltsville, Md.....	21,250	20,830
Range beef-cattle investigations, Miles City, Mont. ..	20,000	.....
Turkey investigations, Miles City, Mont.....	7,500	7,500
Poultry investigations, Glendale, Ariz.....	.....	5,000
Poultry production and color studies, in coopera- tion with Johns Hopkins University .....	5,000	5,000





BUREAU OF ANIMAL INDUSTRY (Continued)		Estimates	Act
Incubator investigations.....		\$10,200	\$10,200
Nutrition investigations with farm animals, including poultry.....		17,500	.....
Meat investigations.....		41,800	25,000
Researches on miscellaneous animal parasites in the South.....		15,000	15,000
Researches on miscellaneous animal parasites in other sections.....		26,780	21,000
Investigation of parasitic protozoa.....		4,000	4,000
Cattle grub area control tests.....		50,000	50,000
Miscellaneous pathological investigations.....		10,900	7,500
Loco weed eradication in Southwest.....		.....	5,000
Investigation of anaplasmosis of cattle.....		20,000	20,000
Livestock production in South (New Iberia station)...		10,000	10,070
		277,830	206,100
<u>Items not included in B.A.I. totals as research:</u>			
Increases: Extension of hog-cholera control work ...		9,000	.....
Sheep scabies eradication work in Louisiana, Mississippi, and Kentucky.....		15,000	4,185
Tick eradication in Louisiana, Mississippi, and Arkansas .....		9,450	.....
Decrease:			
Tuberculosis eradication.....		256,870	256,870
BUREAU OF DAIRY INDUSTRY:			
Dairy cattle breeding and herd improvement.....		21,000	8,746
Ice cream investigations.....		5,000	2,400
Nutrition of dairy cows.....		22,000	6,260
Construction at Beltsville farm.....		15,500	7,600
Butter and by-products investigations.....		5,100	.....
Milk powder investigations.....		3,860	2,400
Bacteriology and chemistry of milk.....		3,000	1,860
Effect of temperature and humidity on milk production		7,000	.....
Dairy cattle breeding work at Beltsville - increased operating expenses.....		9,500	.....
Increased facilities at Huntley (Mont.) dairy station.....		2,000	1,390
		93,960	30,656
BUREAU OF PLANT INDUSTRY.			
Cooperative Federal-State plant disease survey.....		6,000	.....
Mushroom parasites and diseases.....		6,000	.....
Investigation of fungous parasites of insects.....		5,000	.....
Investigation of crown gall on nursery stock, and crown gall survey .....		6,000	6,000
Phoney disease of peaches in Georgia and adjacent States.....		4,000	14,000
Apple blotch, bitter rot, and leaf-spot spraying experiments.....		5,000	.....
Study of carbon di-oxide as agency in control of storage fruit rots.....		7,000	4,000







	<u>Estimates</u>	<u>Act</u>
BUREAU OF PLANT INDUSTRY (Continued).		
Physiological diseases of fruits.....	\$4,000	.....
Market fruit pathology .....	10,000	.....
Study of new fungicides (spray residue work).....	7,000	\$8,695
Apple canker investigations in Pacific Northwest....	15,000	15,000
Pecan disease investigations.....	7,500	.....
Pathological work at forest experiment stations.....	20,000	10,000
Investigation of European larch canker.....	15,000	.....
Investigation of Woodgate rust affecting pine.....	15,000	.....
Forest products pathology.....	10,000	.....
Potato virus disease.....	15,000	.....
Breeding disease-resistant potatoes.....	6,000	.....
Diseases of snap beans and peas grown for canning...	30,000	7,500
Bulb diseases .....	10,000	10,000
Cabbage diseases.....	10,000	.....
Vegetable market pathology.....	10,000	.....
Curly-top virus disease of vegetables.....	20,000	7,430
Seed-borne diseases of vegetables.....	10,000	.....
Alfalfa diseases in Mississippi Valley States.....	2,500	.....
Cotton root-rot investigations.....	.....	8,000
Securing and testing moisture-resistant dates.....	10,000	10,000
Securing and testing new Citrus stocks.....	5,000	.....
Plant growth as affected by length of daylight.....	20,000	.....
Cotton improvement, development of basic seed stocks, and establishment of one-variety condition of pro- duction.....	65,000	19,200
Rubber investigations.....	200,000	55,000
Abaca and other fiber plant investigations.....	5,000	.....
Study of functions of colloids in living plant cells,	10,000	.....
Investigation of nemas and diseases produced by them.	10,000	.....
Rice investigations in Missouri and adjacent States..	9,000	7,800
Grain sorghum investigations under dry-land condi- tions.....	9,000	.....
Corn root-rot, stalk-rot, and ear-rot investigations.	6,500	.....
Virus diseases of cereals.....	20,000	.....
Stinking smut of wheat.....	7,000	5,000
Tobacco fertilizer investigations.....	5,000	1,260
Sugar-cane breeding work in Florida, and collecting and testing disease-resistant types from Melanesia.	15,000	15,000
Testing sugar beets for resistance to curly-top.....	10,000	10,000
Sugar-beet seed work.....	5,000	5,000
Weed control investigations.....	5,000	.....
Blueberry investigations in South Atlantic States....	17,600	2,500
Establishment of new dry-land agriculture field station in Umatilla County, Oregon.....	.....	10,000
Horticultural and demonstration (shelter-belt) work at Woodward, Okla.....	35,000	.....
Horticultural experiment station at Cheyenne, Wyo.....	100,000	100,000
Relation of cropping methods to management and qual- ity of irrigation water and subsoil water.....	10,000	.....







BUREAU OF PLANT INDUSTRY (Continued).

	Estimates	Act
Effect on crop growth of boron salts in irrigation water.....	\$33,000	\$33,000
Utilization of surplus and carry-over of nuts.....	5,000	.....
Pecan cultural problems.....	17,500	.....
Establishment of pecan experiment station at Shreveport, La.....	.....	15,000
Pre-cooling of fruits for shipment.....	20,000	15,000
Transportation and handling of California citrus fruits.....	15,000	.....
Cleansing of fruits treated with arsenical sprays..	10,000	9,340
Physiological studies in fruit and vegetable production.....	10,000	.....
Peach breeding work, in cooperation with Leland Stanford University.....	3,000	3,000
Breeding strawberries, raspberries, and blackberries	10,000	10,000
Fruit improvement by bud selection.....	5,000	.....
Fruit utilization.....	10,000	.....
Experimental greenhouse repairs.....	10,000	.....
Cultural requirements and varietal adaptation of vegetables.....	10,000	.....
Production, standardization, improvement, and regional adaptation of vegetable crops for canning.....	50,000	25,000
Jerusalem artichoke investigations.....	5,000	.....
Potato improvement for seed purposes.....	31,000	.....
Bulb culture.....	10,000	.....
Handling nursery stock through winter and sales period.....	30,000	.....
Fill on Columbia Island.....	3,000	.....
Agricultural exploration in foreign countries.....	15,000	.....
Increased facilities at Bell (Md.) plant introduction station.....	13,200	4,300
Increased facilities at Chapman Field (Fla.) plant introduction station. ....	8,000	.....
Increased facilities at Chico (Calif.) plant introduction station.....	3,000	3,400
Development of new plant testing at Savannah (Ga.) plant introduction station.....	5,000	.....
Alfalfa investigations.....	15,000	14,500
Investigation of soybeans and miscellaneous legumes, grasses, and winter cover crops in South.....	20,000	10,000
Red clover investigations.....	45,000	10,000
Improvement of ranges and pastures in cotton belt...	25,000	10,000
Investigation of heritable variations in plants through vibrations of high frequency.....	7,500	.....
	1,269,300	493,925

Item not included in B.P.I. total as research:

Increase:

Cooperation with Customs Division, Treasury Department, in enforcing amendments to Seed Importation Act relating to coloring of imported alfalfa and other seeds.....	10,000	9,462
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	<u>Estimates</u>	<u>Act</u>
<b>FOREST SERVICE.</b>		
Heat-insulating value of wood.....	\$10,000	.....
Grading lumber for density.....	10,000	.....
Correlating mechanical, chemical, and physical properties of wood.....	15,000	.....
Decay hazards in typical wooden houses.....	10,000	.....
Development of fire-resistant wooden construction...	10,000	.....
Investigating practicability of small saw-mill service for timber operators.....	10,000	\$1,580
Investigating problems of pulp making from resinous woods.....	15,000	.....
Study of lumber storage and handling practices.....	10,000	.....
Study of national-forest range and grazing problems in the Southwest.....	30,000	.....
Forestry in relation to problem of submarginal agricultural lands.....	25,000	.....
Economic factors affecting industrial forestry.....	25,000	.....
Silvical investigations, Pacific Northwest Forest Experiment Station.....	15,000	.....
Silvical and other investigations, California Forest Experiment Station.....	20,000	.....
Silvical investigations, Lake States Forest Experiment Station.....	15,000	1,220
	<hr/> 220,000	<hr/> 2,800
<b>BUREAU OF CHEMISTRY AND SOILS.</b>		
Editorial and general administrative work.....	5,000	3,360
Food research.....	15,000	10,000
Fruit utilization.....	25,000	10,000
Investigation of hide removal and curing, and of tanning materials and methods.....	30,000	10,053
Lignin utilization.....	5,000	5,000
Composition and utilization of vegetable oils and fats.	5,000	3,000
Sugar-cane utilization.....	15,000	15,000
Sweet-potato utilization.....	10,000	10,000
Extension of plant-dust explosion work.....	10,000	.....
Researches on farm fires.....	15,000	10,000
Study of naval stores production and adaptability to various uses.....	20,000	5,000
Coordination of soil chemistry with classification and mapping of soil types.....	10,000	5,000
Nitrogen producing investigations.....	7,400	6,060
Phosphate and potash production investigations....	8,000	5,000
Soil erosion studies.....	25,000	9,485
Muck and peat land investigations.....	8,000	.....
Map-drafting work.....	6,000	6,000
Researches in the mycology of soils.....	4,000	.....
Crop experiments with concentrated fertilizers....	7,000	4,650
Soil fertility investigations on sugar-cane soils.	5,000	20,000





	<u>Estimates</u>	<u>Act</u>
BUREAU OF CHEMISTRY AND SOILS (Continued).		
Cooperative experiments with potash materials.....	\$2,500	.....
Cotton root-rot fertilizer studies.....	.....	\$26,000
Pecan soil studies, Shreveport, La.....	.....	5,000
	237,900	168,608
BUREAU OF ENTOMOLOGY.		
Lecanium scale of apples and other fruits in Washington State.....	5,000	.....
Tests with arsenicals to devise better spraying schedules, as well as substitutes for lead arsenate.....	.....	5,000
Oriental peach moth investigations.....	5,000	.....
Investigation of methods of disinfecting nursery and other products subject to quarantine.....	10,000	9,920
Preparation of insecticide pharmacopoeia.....	5,000	.....
Japanese beetle research.....	5,000	.....
Investigation of Japanese garden beetle.....	5,000	.....
Pecan insect investigations, Shreveport, La.....	.....	5,000
Blueberry maggot studies in Maine.....	.....	5,000
Bulb insect investigations.....	20,000	10,000
Mexican fruit worm research.....	15,000	14,100
Investigation of European earwig in Pacific Northwest	12,500	11,410
Investigation of vegetable weevil in California.....	7,500	5,000
Tobacco wireworm investigations.....	6,000	7,500
White-pine weevil investigations in New England....	5,000	.....
Investigation of termites and other insects attack- ing forest products.....	8,000	.....
Establishment of laboratory at Madison, Wis., for researches on forest product insects.....	5,000	.....
Bark-beetle investigations in Western States, in co- operation with Forest Service.....	30,000	5,810
Investigation of insect infestations in National Parks.....	5,000	4,000
Control of sugar-cane moth borer by means of parasites.....	6,000	6,000
Investigation of insect transmission of sugar-cane "root rot".....	3,400	3,365
Investigation of southwestern corn borer.....	5,000	.....
Investigation of year-round shipment of alfalfa meal free of weevil.....	5,000	5,000
European corn borer research.....	50,000	50,000
Investigation of cane borer, affecting corn, in eastern Texas.....	.....	6,840
Dusting by airplane for control of cotton boll weevil	25,000	.....
Investigation of Thurberia cotton weevil.....	25,000	.....
Cotton pink bollworm research.....	20,000	13,945
Cotton boll weevil control work in Oklahoma.....	.....	10,000
Cattle grub biological research.....	25,000	25,000
Investigation of screw worm and wool maggot affect- ing sheep and goats.....	15,000	15,000





	<u>Estimates</u>	<u>Act</u>
<b>BUREAU OF ENTOMOLOGY (Continued).</b>		
Investigating insects attacking dried fruits.....	\$5,000	\$5,000
Investigating insects affecting household furnish- ings in storage.....	5,000	.....
Testing new fumigants for value in control of storage insects.....	5,000	.....
Insect pest survey.....	13,922	12,723
Identification and classification of insects (taxonomy).....	28,600	5,000
Researches on physical, chemical, and therapeutic properties of honey.....	5,000	.....
Studies of organization of beekeeping industry and of best methods applicable to principal beekeep- ing regions.....	7,000	.....
Establishment of bee laboratory at Baton Rouge, La...	.....	10,000
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	397,922	250,613
<b>BUREAU OF BIOLOGICAL SURVEY.</b>		
Laboratory preparation of poisons, and study of rodent and predatory animal eradication methods...	2,500	2,500
Investigation of food habits of migratory birds.....	3,500	3,500
Purchase of foxes and minks for experimental work...	6,500	.....
Investigation of epidemic diseases of fur animals...	5,000	5,000 (a)
Operation of experimental rabbit farm in California.	7,500	2,500
Investigation of fur resources of certain areas.....	6,000	.....
Food habits, diseases, and parasites of game animals and birds, fur-bearers, and predatory animals.....	20,000	5,000
Feeding and breeding habits of groups of wild animals containing injurious species, particularly of rodents.....	15,000	.....
Study of waterfowl conditions, as basis for migra- tory-bird act enforcement.....	25,000	.....
Reindeer investigations in Alaska.....	1,055	.....
	-----	-----
	92,055	18,500
<b>BUREAU OF AGRICULTURAL ECONOMICS.</b>		
Study of rural credit, crop insurance, and taxation problems.....	10,400	9,294
Investigation of use of submarginal agricultural lands.....	20,000	.....
Cooperation with States in preparation of Federal- State outlook reports.....	25,000	.....
Researches on factors affecting prices of farm products.....	10,000	10,000
Transportation studies in connection with marketing of farm products, effect of freight rates, etc.,...	10,000	10,000
Study of production, distribution, and consumption of agricultural commodities by individual States and communities within States.....	10,000	.....

(a) Fox diseases.





	<u>Estimates</u>	<u>Act</u>
BUREAU OF AGRICULTURAL ECONOMICS (Continued).		
Investigations relating to wool and mohair standards..	\$5,000	\$5,000
Study of economic factors affecting marketing of eggs and dressed poultry.....	5,000	5,000
Investigation of marketing of hay and alfalfa meal and formulation of alfalfa-meal standards.....	5,000	5,000
Problems of cotton ginning as related to grade, quality, etc., of product.....	10,000	10,000
Cooperation with States in marketing investigations....	5,000	5,000
Further researches in the utilization of cotton.....		10,000
Development and extension of agricultural outlook work	100,000	68,220
Completion of experiments in meat grading, according to standards fixed by Department.....	50,000	.....
Statistical service on poultry industry.....	50,000	5,245
Inauguration of statistical service on hides.....	15,000	.....
Statistics of grade and staple length of cotton.....	279,000	265,000
Establishment of office at Shanghai, China, for marketing investigations in the Orient.....	10,000	10,000
Cooperative marketing investigations.....	50,000	39,560
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	669,400	457,319
BUREAU OF HOME ECONOMICS.		
Food and nutrition research.....	5,000	5,037
Use of cotton and woolen fabrics in the home.....	8,000	.....
Dietary studies, and national survey of dietary habits.....	10,000	5,000
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	23,000	10,037
MISCELLANEOUS.		
Special corn borer research.....	150,000	150,000 (a)
Special fundamental research.....	50,000	.....
Eighth International Dairy Congress.....	10,000	10,000
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	210,000	160,000

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(a) Authorized to be expended from \$10,000,000 appropriation provided by Act of February 23, 1927, for control of European corn borer.





DEPARTMENT OF AGRICULTURE

RESEARCH WORK

Summary, by Bureaus, of Increases Recommended in Department  
Estimates for 1929, and Amounts Provided by Agricultural  
Appropriation Act, 1929.

	<u>Estimates</u>	<u>Act</u>
Office of Information.....	\$50,000	.....
Library.....	5,420	\$5,420
Office of Experiment Stations.....	558,780	494,194
Weather Bureau.....	25,320	.....
Bureau of Animal Industry.....	277,830	206,100
Bureau of Dairy Industry.....	93,960	30,656
Bureau of Plant Industry.....	1,269,300	493,925
Forest Service.....	220,000	2,800
Bureau of Chemistry and Soils.....	237,900	168,608
Bureau of Entomology.....	397,922	250,613
Bureau of Biological Survey.....	92,055	18,500
Bureau of Agricultural Economics.....	669,400	457,319
Bureau of Home Economics.....	23,000	10,037
Miscellaneous.....	210,000	160,000
Total.....	4,157,887	2,298,172

